EXHIBIT 1

Declaration of Terry L. Murray and D. Scott Cratty

Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D.C. 20554

In the Matter of)	
)	
Review of the Commission's Rules Regarding)	
the Pricing of Unbundled Network Elements)	WC Docket No. 03-173
and the Resale of Service by Incumbent Local)	
Exchange Carriers)	

Declaration of Terry L. Murray and D. Scott Cratty

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 3 of 37

I. QUALIFICATIONS AND INTRODUCTION

- My name is Terry L. Murray. I am President of the consulting firm Murray & Cratty, LLC. My business address is 8627 Thors Bay Road, El Cerrito, CA 94530.
- My name is D. Scott Cratty. I am Vice President of the consulting firm Murray & Cratty, LLC. My business address is 725 Vichy Hills Drive, Ukiah, California, 95482.
- 3. We filed a declaration in support of the Joint Comments of Broadview Networks, Eschelon Telecom, KMC Telecom, Mpower Communications, NuVox, Inc., Sage Telecom, Inc., Talk America, XO Communications, and Xspedius (hereafter "CLEC Coalition") on December 16, 2003. Exhibits TLM/DSC-1 and TLM/DSC-2, respectively, to that declaration describe our qualifications and experience as they relate to this proceeding.
- 4. The CLEC Coalition again asked us to focus on supplying the Commission with guidance and information based on practical experience in working through the application of the Federal Communications Commission's ("Commission's" or "FCC's") existing Total Element Long Run Incremental Cost ("TELRIC") guidelines in the states.
- 5. The opening comments and declarations of the incumbent local exchange carriers ("ILECs") repeatedly call for a modified unbundled network element ("UNE") costing standard based on what they describe as "actual" forward-looking costs.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004

Page 4 of 37

In the following sections, we explain why the Commission should reject this methodology, which is little more than an appeal to make UNE costs dependent entirely on the ILECs' own embedded data regarding their current networks and operations.

- 6. The ILECs have long been and, in fact, still are submitting studies to state commissions that implement exactly the "new" standards that the ILECs are now advocating in this docket. But, until now, the ILECs have been calling these studies TELRIC-compliant. Cost studies performed under the "new" ILEC-championed standard would not be any simpler for states to review or more accurate than the studies the states are currently reviewing. They would be the same studies.
- 7. The ILECs allege that their "actual" networks and costs provide reasonable starting points for a forward-looking cost study because price cap regulation already has driven the ILECs to become efficient. As discussed in our December 16, 2003 declaration, that is not the case. Ay such assumption would merely lock in existing inefficiencies that the Telecommunications Act of 1996 ("Act") was designed to eliminate.
- 8. In this reply declaration, we further demonstrate that, regardless of how efficient or inefficient the ILECs' current operations may be, reliance on a combination of ILEC embedded network information, ILEC short-run plans, and ILEC current expense data which is what the ILECs advocate under the banner of an "actual

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 5 of 37

- forward-looking cost" would produce only inflated, often nonsensical, cost results.
- 9. Likewise, incorporating current ILEC-reported (*i.e.*, booked) recurring and nonrecurring expenses into UNE prices would force competitors to pay for non-regulated, broadband, special services, retail costs and other costs that are entirely unrelated to the UNEs that the ILEC is actually making available to competitors. Such an approach would grossly inflate UNE prices and deter competition.
- 10. Studies following the "actual forward-looking cost" standard that the ILECs advocate typically produce UNE loop cost estimates as high as or even much higher than the ILECs' retail prices for a local exchange service as a whole (including local switching and other services). Thus, such high UNE prices either would create insurmountable price squeezes for competitors or would require retail price increases to allow competition.
- 11. The current TELRIC standard allows all parties an opportunity to demonstrate what costs and network designs make sense for an efficient provider in a competitive market. In contrast, the ILECs' standard would largely rob UNE costing proceedings of objectivity and balance. Worse, as the data that the ILECs do have are often very poor, compelling state regulators to work with whatever data the ILEC provides would often predetermine an unreasonable result before the UNE pricing proceedings even begin.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.

WC Docket No. 03-173
January 30, 2004
Page 6 of 37

II. THE ILECS' COMPLAINTS ABOUT TELRIC ARE PRIMARILY AN EXCUSE TO FORECLOSE FACT-BASED ANALYSIS OF WHAT IS EFFICIENT AND FORWARD-LOOKING.

- 12. The ILECs unanimously find fault with the Commission's existing TELRIC regulations. They disagree only as to how colorfully to describe the Commission's current UNE pricing regime, arguing variously that it is "fundamentally flawed," "deeply flawed," destined "if allowed to continue" to be "devastating for consumers and the economy or merely, as the polite BellSouth demurs, riddled with "deficiencies."
- 13. The Commission should consider the ILECs' incentives in making such claims.

 In the current round of new state "impairment" proceedings, the ILECs are attempting to eliminate the availability of network elements at UNE prices in broad areas of the country. Should the ILECs simultaneously convince the Commission to implement a new costing and pricing standard that makes the use of UNEs uneconomic as an entry strategy, they will complete a "pincer move" that will squeeze out competition even in the areas that survive the ILECs' impairment challenges. Moreover, if UNEs become uneconomic in the areas where states determine that competitors truly will be impaired without access to those elements, facilities-based competition elsewhere may be jeopardized

¹ Comments of the Verizon Telephone Companies, §I.

² Opening Comments of SBC Communications Inc., § I.B.

³ Comments of Qwest Communications International, Inc., at ii.

⁴ Comments of BellSouth, at 2.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 7 of 37

because the CLECs will be unable to capture scope and scale economies by offering service ubiquitously.

- 14. Furthermore, the ILEC theme that TELRIC produces UNE prices that are too low and thus deter investment rings false. The Commission has already deemed that the investments that the ILECs will make in certain broadband and packet-based networks need not be unbundled or must only be unbundled in a manner that precludes UNE-based competitors from obtaining equal access to the full capabilities of the loop. Those regulations give the ILECs an added incentive to invest in new facilities, as doing so makes UNE-based entry unattractive or unavailable.
- 15. Nor is there any virtue in the ILECs' complaint that TELRIC "illogically" assumes a company can have the same scope and scale as the incumbents actually do, but can also be a participant in a competitive market (as the ILEC also claim they are). From a public policy perspective, the assumption is essential because it makes competition feasible even when competitors cannot economically replicate the ILECs' facilities and it ensures consumers will continue to benefit from those scope and scale economies. The Commission should consider such ILEC positions with a "grain of salt" equal in size to the commenter.

⁵ *Accord*, *First Report and Order*, In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98, released August 8, 1996 ("*Local Competition Order*") ¶ 679.

⁶ That size can be substantial, to say the least. Since the Act, the increase in the ILECs' scope and scale, through mergers, acquisitions and expansion into new markets such as DSL and

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 8 of 37

- 16. To rectify what they describe as the current "illogical" TELRIC framework, the ILECs propose that the Commission impose a new "actual forward-looking" cost standard that assumes away the ILECs' monopoly advantage. As the ILECs describe it, this method would require state commissions to adopt whatever recurring and nonrecurring expenses the ILECs report that they actually incur (how one might determine which expenses relate to specific UNEs remains unexplained) to maintain their embedded networks and make small additions thereto. In addition, states would be required to develop UNE investments by taking as a given the ILECs' claimed "actual" network architectures, but calculating a new "replacement" capital cost that would compensate each ILEC for replacing all of its embedded equipment and facilities with modern facilities. This projection of replacement costs would be based on recent ILEC "actual" additions to their embedded networks; therefore, this methodology would completely ignore the scale and scope economies that the ILECs were able to achieve when they first built out their embedded networks in a monopoly environment, with virtual guarantees of cost recovery from captive ratepayers.⁷
- 17. This new "actual forward-looking cost" method the ILECs advocate has little (if any) rational connection to the cost that ILECs "actually" incur to provide UNEs

interLATA toll, has far outstripped the pace at which competition in their core local exchange business has grown.

⁷ Given that the ILECs' current capital additions are largely related to broadband and packet deployment, it is unclear why the ILECs believe such "actual" current investments are relevant to UNEs at all.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004

Page 9 of 37

on their existing facilities. The methodology is, instead, an ILEC wish-list of costs would like to pass on to competitors. For example, the ILECs seek to have competitors pay for maintaining old, inefficient plant, while also paying the ILEC costs to replace that old investment with new, broadband facilities.

- 18. A more accurate representation of the ILECs' "actual forward-looking cost" would recognize that the ILECs actually provide most UNEs using existing facilities that are not capacity-constrained. The "actual forward-looking cost" of those facilities would have no investment component; it would simply consist of ongoing maintenance expenses. Most new ILEC investment is likely unrelated to the UNEs available to CLECs.
- 19. The ILECs' recommended approach effectively would exclude non-ILEC parties from the process of establishing UNE costs. The ILECs assert that the necessary data for developing UNE costs are the ILECs' own data about their "actual" expenses, "actual" network design and "actual" network plans. If the ILECs have their way, state commissions will no longer be able to review whether the ILEC data reflect reasonable, efficient costs that would be reflected in the prices that a company in a competitive environment would be able to charge its customers.
- 20. At the same time as the ILECs complain that existing CLEC studies are "black boxes" and are insufficiently supported, the ILECs propose to make UNE pricing entirely dependent on their own data. They do not explain what additional steps they will take to make those data equally available to all parties or to ensure that

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 10 of 37

the data are fully audited, verifiable, documented and explained. Instead, they simultaneously seek to reduce their burden of proof relative to their own UNE costs. To the contrary, the Commission should reaffirm that the ILECs bear the burden of proof for UNE pricing—indeed, this burden would need to be increased substantially if the ILECs were to prevail in their quest for what they describe as "actual forward-looking costs."

- Overall, the ILECs' proposals do not appear to be anything like an attempt to propose a concrete, consistent methodology that has any connection to a principled economic approach. The ILEC proposals are often inconsistent and self-serving down to the last dime, as reflected in (some of) their positions regarding the nonrecurring charge to disconnect UNEs. Verizon, for example, argues that it should be allowed to recover even that cost upfront of even though a competitor will not cause that cost and the ILEC will not "actually" incur it until whatever time in the future (if ever) that the CLEC issues a disconnect order.
- 22. The ILECs' assault on TELRIC as unreasonable and unrealistic is particularly hypocritical in light of their own advocacy over many years concerning the appropriate cost basis for retail price floors. TSLRIC (TELRIC's twin, retail service costing methodology)¹⁰ or even less stringent forms of incremental costing

⁸ E.g., Comments of Owest Communications International, Inc., at 64-66.

⁹ Comments of the Verizon Telephone Companies at 86-87.

¹⁰ Total Service Long-Run Incremental Cost or TSLRIC and Total Element Long-Run Incremental Cost are identical in most respects with the major exception that the "cost objects" in TSLRIC studies are retail services, whereas the "cost objects" in TELRIC studies are UNEs.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 11 of 37

methodologies has long been the ILECs' chosen methodology for retail price floors. Both Verizon and SBC continue to use and advocate TSLRIC-based price floors for competitive services today. Yet, we know of no ILEC that has argued TSLRIC produces outrageously low price floors. The ILECs appear to have no theoretical objection to this methodology when the issue is how they should be permitted to price competitive services. Instead, the basic framework used in TELRIC studies is only objectionable when the issue is how they should price services that are essential to competitors.

23. The ILECs also uniformly complain about what they characterize as the "radically indeterminate" or "black box" variations in the application of TELRIC from state to state. In doing so, they do not consider or mention how different their own proposals may have been in those different states, how widely the existing retail rates in those states may vary, how much the actual cost of service in different states may vary or how utterly inscrutable their own input data and models have been found to be (even to their own cost witnesses). They typically fail to disclose the timing of those decisions, which is a key variable as intervening court decisions and cost model improvements changed the states' ability to uniformly interpret TELRIC as time passed. As the Commission will discover when it looks, CLECs likewise and with greater justification also have

¹¹ Opening Comments of SBC Communications, Inc., § I.B.2.

¹² Comments of the Verizon Telephone Companies at 4.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 12 of 37

- complained about unreasonable, unsupported ILEC cost study inputs and assumptions in numerous ILEC studies.
- 24. Having participated in a wide range of state UNE costing dockets, we have seen that the nature of the cost evidence supplied in those cases is by no means symmetric. CLECs often are compelled to present multiple sources of justification for each input to their UNE costs models and to submit experts with extensive industry experience for deposition and cross examinations. ILECs typically present cost studies based on unexplained data extracted from unexplained and unexamined databases and provide internal "regulatory department" witnesses to vouch for inputs supplied by ILEC subject matter experts ("SMEs"). These subject matter experts are rarely identified, let alone made available for examination. Thus, the real "black box" that state commissions typically face is the source of the ILECs' reported costs. The ILECs' approach to blame the regulator, instead of themselves, is unreasonable and unfair.
- III. THE ILECS ALREADY ROUTINELY FILE STUDIES THAT UTILIZE THE "ACTUAL FORWARD-LOOKING" STANDARD THEY ARE URGING THE COMMISSION TO ADOPT; SUCH STUDIES SIMPLIFY NOTHING.
- 25. In pushing for an (inherently paradoxical) "actual forward-looking" cost standard, the ILECs fail to mention at least two important things. First, they do not mention that they have argued and are currently arguing in state UNE costing dockets that their existing cost studies already use the "actual forward-looking cost" standard

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004

Page 13 of 37

they are advocating in this proceeding. Thus, should the Commission adopt the ILEC-proposed changes, it is difficult to imagine how UNE cost analysis might become less complex or what, if anything, would actually change about the existing generation of ILEC UNE cost studies.

- 26. Second, the ILECs fail to mention that they do not have and that there is no such thing as "actual forward-looking" cost data. Thus, the standard that they advocate would necessarily be based on theories, assumptions and projections. Indeed, as we illustrate below, the ILECs' own recent attempts to use the data that they do possess to develop what are allegedly "actual forward-looking costs" have failed miserably.
- 27. Regardless of the existing TELRIC guidelines, the ILECs have long been estimating UNE costs using exactly the "actual forward-looking" cost approach that they now urge the Commission to adopt. The policy discussion in ILEC testimony and briefs in state TELRIC dockets is remarkably similar to the ILEC positions in this docket. For example, in advocating its most recent "LoopCAT" UNE loop study, SBC argues that states should adopt its new study because:
 - Consistent with ... common sense TELRIC, the
 existing customer locations and facility routes are used
 to reflect the physical characteristics of SBC['s] ...
 forward-looking network.
 - As TELRIC requires, SBC's model produces forwardlooking costs of providing UNEs in a fully functional network ...

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 14 of 37

- The FCC and Federal Court have explicitly approved forward-looking cost studies that start with measurements of the existing network.
- SBC's cost model is based on the current SBC network.
- SBC's Network design addresses real world environmental and political conditions.
- SBC costs are based on actual cost data for installation and maintenance. ¹³

SBC's study also incorporates its current expenses with little modification. Thus, SBC's existing UNE cost proposals already reflect the standards that SBC would have the Commission adopt.

28. This is not just our opinion. Recent comments submitted by the Staff of the Michigan Public Service Commission echo our views concerning SBC's cost studies, which are also being reviewed in an ongoing UNE cost docket in that state. According to the Michigan PSC Staff:

SBC has violated these two basic FCC TELRIC requirements. In its filing, SBC's methodology calculates the total cost of the network based on faulty embedded assumptions, its first violation. The second violation is the use of a fill factor calculated using its actual fill based on its current utilization of the existing network.¹⁴

Also,

Despite continual warnings and findings by the Commission regarding use of embedded costs to calculate the shared and

¹³ SBC California's Notice of Ex Parte Meeting with Commissioner Advisors, California Public Utilities Commission Dockets A.02-02-034/A02-03-002, 8/18/03.

¹⁴ Initial Comments of the Michigan Public Service Commission Staff in Michigan PSC Case No. U-13531, In The Matter, On The Commission's Own Motion, To Review The Costs Of Telecommunications Services Provided By SBC Michigan, January 20, 2004, at 25.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 15 of 37

common cost factors, SBC has once again taken the same approach. 15

29. Verizon also recently unveiled a new "VzCost" set of recurring and nonrecurring cost studies for interconnection, UNEs, access and retail services. ¹⁶ Like SBC, Verizon describes its existing model as one that promotes "economic efficiency by sending, you know, the proper economic signals to all market participants; in other words, a model a [sic] that promotes the economic market entry." Thus, Verizon is likewise currently telling state regulators that its existing models promote economic efficiency and comply with TELRIC, at the same time that it is arguing to this Commission that TELRIC must be overhauled because it does not do so. Notably, Verizon bills its new models as "sufficiently flexible or robust to accommodate any changes that may come about ... and the prime example of that would be the NPRM." Verizon effectively admits that this Commission's adoption of a modified forward-looking cost standard will not result in any simplified cost study, but in continued review of the same existing Verizon

¹⁵ *Id.* at 13.

¹⁶ California Public Utilities Commission technical workshop in the Verizon UNE Phase of docket R.93-04-003 (hereafter "VzCost Workshop"), 1/13/04, Transcript ("Tr.") at 3235-3238 and 3243.

¹⁷ *Id.*, Tr. 3237.

¹⁸ *Id.*, Tr. 3236 and 3243-4. Curiously, Verizon suggests that it does not support incorporating some of the aspects of its in-place, forward-looking network as suggested by the NPRM: "In fact, in the NPRM I think they even talk about the mix of line port technologies. They even talk about the inclusion of analog switches and older DLCs. This is something we don't advocate, but it's out there." *Id.*, Tr. 3244.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 16 of 37

studies. Thus, like magic, Verizon models will meet the requirements of the law today and tomorrow!

30. Like SBC, Verizon claims that its study "starts with the physical characteristics of the real network" and utilizes "realistic customer locations" and recognizes the "constraints imposed by reality." Verizon states that "[f]or example, just a few examples would be rights-of-way, local ordinances, natural barriers, and uncertainty, and so forth." Thus, Verizon claims that its existing TELRIC study already captures all of the "real-world" constraints that the FCC's TELRIC rules allegedly lack. Moreover, Verizon asserts that it developed its new UNE cost model by reviewing "engineering, you know, vendor information, our internal company processes, you know, in order to -- to utilize the appropriate information in data gathering." Thus, Verizon's TELRIC study is already based on all of the data at its disposal concerning its "actual" network. 22

BellSouth approvingly describes its current model as an approach that "builds a loop network along existing roads to geocoded customer locations based on minimum spanning road tree algorithms" – essentially the same approach that the ILECs all condemn in CLEC models – but asserts that this approach would allow the Commission to incorporate "real-world attributes" into a modified TELRIC methodology. Comments of BellSouth at 14. BellSouth's suggestion that its existing study properly reflects "real-world attributes" confirms that when BellSouth encourages the Commission to adopt "existing cable routes and equipment placements" (id.), it does not mean that literally. A calculated minimum spanning tree algorithm-based distance

¹⁹ *Id.*, Tr. 3245.

²⁰ *Id.*, Tr. 3237 and 3243.

²¹ *Id.*, Tr. 3238.

²² As discussed in our December 16, 2003 declaration, TELRIC models presented by CLECs also reflect the "real world" with a very sophisticated level of detail – albeit, in contrast, competitors tend to also strive to ensure that the cost and design inputs they use are reasonably efficient, consistent and commensurate with the ILECs' scope and scale.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 17 of 37

31. The ILECs do no better in presenting "actual forward-looking data" for nonrecurring cost studies. Indeed, the Commission's own Wireline Competition Bureau has just reaffirmed that the time and frequency estimates provided by Verizon Virginia through a worker survey did *not* provide an accurate and reliable basis for estimating nonrecurring costs. The Bureau states:

For the same reasons that we rejected the use of the Verizon surveys in the *Cost Order*, we continue to reject their use here. As we stated, the surveys suffer from numerous deficiencies that make them biased and unreliable, including (1) containing instructions that encourage the respondents to overstate task times, (2) failing to weight survey responses to account for the frequency with which the respondents perform the tasks, (3) failing to exclude outlier results, (4) excessively disaggregating tasks, and (5) assuming inefficient and highly manual procedures that are inconsistent with TELRIC principles. The surveys, thus, remain an improper basis on which to determine non-recurring costs, and we will not rely on them here.²³

We discuss below why the ILECs' data concerning nonrecurring costs are not "actual" or "real-world" data that would be useful in any scenario.

32. One might then ask, "Does reliance on actual ILEC data lead to a simplified, easy to review model?" Certainly, it does not. Consider the sheer bulk of the new Verizon cost studies. Verizon's initial filing of that model in California included

between points along roads is *not* the same as following the literal existing cable route. Thus, BellSouth's comments, like those of other ILECs, appear to be merely an attempt to assert that whatever is in its own databases should be the only thing considered.

 $^{^{23}}$ Memorandum Opinion and Order, In the Matter of Petition of WorldCom, Inc., et al., Pursuant to Section 252(e)(5) of the Communications Act for Expedited Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia, Inc., and for Expedited Arbitration, CC Docket Nos. 00-218, 00-249, and 00-251 (released January 29, 2004) ("Virginia Arbitration Compliance Order") ¶ 9, footnote omitted.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 18 of 37

13 CDs worth of data – not including either Verizon's new loop cost model itself, which is only available on Verizon's computers, or the underlying raw data.²⁴

- 33. The "tip of the iceberg," should the Commission adopt an "actual forward-looking cost" methodology, is Verizon's new user guide for its new "VzCost" approach to UNE costs, which is 728 pages long. That is merely the prelude to thousands more pages of formulas and code that Verizon would force each state commission to review before agreeing to Verizon's version of "actual forward-looking cost."
- 34. In fact, the new Verizon model (really, a set of models) is by far the most complex set of UNE studies we have yet encountered. As even Verizon admits:

You know, we have a very complex network, it's very sophisticated, and the model has to -- we have to have some degree of sophistication in order to accurately model such a sophisticated network.

Now, does it make it complex?

Well, yes, it is complex.²⁵

35. As Verizon admits, a model based on the "real world, actual" ILEC network is, if anything, more complex than other models and necessarily involves the analysis of massive amounts of granular data. Verizon drives home this point when it attempts to explain why its complex model is not too complex.

Okay. I wanted to move forward and look – let's look at an analogy from the art world.

²⁴ VzCost Workshop, Tr. 3317-3318.

²⁵ *Id.*, Tr. 3240.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 19 of 37

This is -- some of you will recognize this as George Seurat's masterpiece, a Sunday Afternoon on the Island of La Grande Jatte.

As you can see from the this picture on Slide 8, there's a lot of activity. Seurat has painted a very complex picture.

But when you look much more closely -- we are going to look in a second at the little girl in the middle of this picture, of all this activity, and you look a little -- down at a finer level – let's go -- what you see is this painting is made up of just a series of dots.

The dots themselves, the little bits of information -they are very simple. And it's just an aggregation of those dots that builds up into the whole picture.

So if you were to close your eyes and look at the picture -- can we go to the slide before -- if you close your eyes for a second, you can't see, you probably cannot remember all the activity going on.

And you open your eyes and there it is, and now we can go back down into the dots and see that it's built up to - to create the whole. ²⁶

- 36. Verizon's analogy is perhaps better than it knows. Seurat's *La Grande Jatte* includes countless thousands of points of color assembled into an amazingly complex work that took Seurat two years and fifty-five studies to complete. It has subsequently been the source of masses of commentary, reams of analysis and debate in the art world.
- 37. Certainly, an analysis of any ILEC "actual forward-looking cost" study will involve many thousands of points of different information, artfully assembled,

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004

Page 20 of 37

and will likewise engender reams of debate. Unfortunately, the ILEC cost study itself may be more a piece of work than a work of art. In a cost study, if the myriad "dots" of ILEC data are arranged incorrectly or are the wrong shape or color relative to where the ILEC places them, then one may well end up with the picture of a dinosaur strolling the banks of the Seine instead of that of a little girl in the park on a Sunday afternoon.

- 38. Verizon's analogy breaks down in another key respect. When viewing Seurat's final product, *La Grande Jatte*, it may be reasonable to "close your eyes" to the underlying detail and still see "the little girl in the middle of this picture." In contrast, with a UNE cost study, it is impossible to close one's eyes to the detail and "see" whether, for example, a resulting \$30.16 per month statewide average per loop cost²⁷ represents anything in the real world or not.²⁸ Contrary to Verizon's argument, with a cost study of any sort, one must be able to examine and understand the underlying detail and must carefully review how the data were assembled to determine if the final picture represents anything meaningful at all.
- 39. Closing regulators' eyes to a massive assembly of "actual" ILEC data, as Verizon and other ILECs invite the Commission to do, would be irresponsible. Indeed,

²⁶ *Id.*, Tr. 3241-2.

²⁷ *Id.*, Tr. 3335.

²⁸ The \$30.16 proposed UNE loop price is nearly double the residential flat-rate local exchange service price for Verizon in California, which was last reviewed in a full rate-setting proceeding in 1994. Thus, adopting this UNE price would lead either to a significant rate increase for retail local exchange customers in California or to a major price squeeze for

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 21 of 37

this recommendation is a formula for disaster in the context of a review of a dominant provider's costs and prices to provide potential competitors with access to bottleneck facilities.

IV. THE ILECs' SUPPOSED "REAL WORLD" DATA ARE UNSUITABLE FOR USE IN A FORWARD-LOOKING COST ANALYSIS.

- 40. Once one gets past the ILEC rhetoric, and scratches the surface of the actual ILEC cost studies and data, it becomes painfully clear that the ILECs have no intention of modeling a forward-looking "real world" network and *would not have the data* to do so should that be their goal. ²⁹
- 41. Indeed, there is no such thing as an ILEC database with "actual forward-looking" data. Instead, the ILECs have an array of accounting data and an array of databases developed over the years for varying purposes such as network planning or monitoring (of varying and often dubious quality) none of which were designed to supply the specific types of data needed to develop a forward-looking cost.
- 42. On the expense side, ILEC accounting data typically consist of a roll-up of different types of costs (major equipment, minor material, direct expenses, allocated expenses, loadings, transfer costs across departments and among

California CLECs attempting to compete with Verizon using either a UNE-Platform strategy or deploying their own switching in combination with Verizon's UNE loops.

²⁹ Thus, moving to a model based on "actual cost" would not allay the concerns expressed by a former state commissioner regarding the difficulty he had implementing TELRIC. *See*, Comments of the Progress and Freedom Foundation at 7 and 9.

Declaration of Terry L. Murray and D. Scott Cratty In Support of Reply Comments of Broadview Networks, Eschelon Telecom,

KMC Telecom, Mpower Communications, NuVox, Sage Telecom, Talk America, XO Communications, and Xspedius.

WC Docket No. 03-173

January 30, 2004

nuary 30, 2004 Page 22 of 37

affiliates, additional mysterious accounting adjustments such as accruals for future benefit obligations) and various overheads. The accounting costs blend expenses relating to different vintages of equipment and network architecture, ranging from maintaining old, fully depreciated equipment, to installing new, packet, broadband and DSL-specific equipment. Often, the ILECs themselves lack the wherewithal to disaggregate this information in the manner that would be necessary to identify which costs are "actually" associated with UNEs.

A. ILECs Have No "Actual" Data Regarding UNE Nonrecurring Costs.

- 43. Nowhere is this as true as in the ILECs' supposed "actual" nonrecurring cost studies which typically use no "actual" ILEC expense data whatsoever because those data are completely useless in developing UNE-specific nonrecurring costs. The typical non-recurring cost study is a list of tasks. For each task, there is a total "task time" to perform that task. Then, there is a "probability of occurrence" which represents the likelihood that the ILEC will have to perform that task to accomplish the overall activity being studied (*e.g.*, how often do I have to send a technician out to an unmanned central office to make a cross-connect and how many cross-connections do they typically do once there). Finally, there is what is all-too-appropriately-termed a "loaded" labor rate.
- 44. The list of tasks needed to connect any UNE does not appear anywhere in the ILECs' "actual" business cost data or in its books of account. Instead, the tasks

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 23 of 37

that ILECs include in any nonrecurring cost study are first identified by an ILEC SME, as are most of the task times that ILECs report.

- 45. For example, ILEC nonrecurring UNE cost studies are typically based on SME inputs, employee observations or employee surveys. ILECs simply do not maintain any "real" data about, for example, the cost to place a jumper, process an order or any of the other necessary inputs in developing UNE costs.
- 46. This was confirmed a few days ago in a Texas arbitration hearing, when SBC was asked to explain how it knew, based on its "actual" data, that it was not double-counting costs between its reported recurring and nonrecurring costs. SBC admitted that it has no actual data about what costs might be nonrecurring (let alone related to UNEs) at all:

It's generally accounted for differently now. It's charged to the installation order, but the way they charge their time at the end of the day now is done by profile, which means that they have a sample – without getting in too much detail, they sample what they do each day, installation, buried. They take a sample of all of our technicians at one point in time or another, and then the rest of the technicians do not have to fill out that detail. They'll fill out profile time. And this would be all charged to the order as a result. It wouldn't be broken out as a maintenance charge, if that's what you're asking. It's not going to an "R" code, which would be repair. But we don't use coding anymore, necessarily, when we close out. We do use a task sampling.

That's not exactly what you're looking for, I know. 30

³⁰ Transcript of Proceedings Before the Public Utility Commission of Texas, PUC Docket No. 28600, January 21, 2004, Tr. 311-312.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004

Page 24 of 37

- 47. The ILECs complain at length that CLECs use SME inputs in their analysis (regardless of how qualified those SMEs may be). They fail to mention that their own studies rely on their own SMEs, who are often entirely hidden or prove to be underqualified. The proper way to test Subject Matter Expert opinion is to identify those SMEs, and their qualifications, and to make them available for discovery and cross-examination. The "actual forward-looking cost" approach that the ILECs advocate would merely treat their SMEs as automatically being superior to the CLEC SMEs, without such an evidentiary test.
- 48. ILEC time and motion studies, in the few instances in which they are ever performed, suffer from similar limitations. The time-and-motion studies do not necessarily provide any meainingful insight into the ILECs' "actual forward-looking costs." Instead, the ILECs can contrive their time and motion studies to monitor selected employees who have been made to understand that the study is being done to determine how much competitors will have to pay their company to use facilities in the future (or how many jobs the employee will have to do each day). Moreover, before a time and motion study can begin, a SME must first decide what tasks will be studied, which automatically introduces the possibility of bias or error.
- 49. Moreover, "loaded" labor rates appear nowhere in the ILEC's "actual" business data. They are instead concocted by the ILECs through a chain of assumptions about how to allocate a wide range of business expenses that have no specific

Declaration of Terry L. Murray and D. Scott Cratty In Support of Reply Comments of Broadview Networks, Eschelon Telecom,

> KMC Telecom, Mpower Communications, NuVox, Sage Telecom, Talk America, XO Communications, and Xspedius.

WC Docket No. 03-173

January 30, 2004 Page 25 of 37

relationship to the task of connecting a specific UNE. These expenses include

supervisory time and "minor" materials, in addition to adjustments for time off

and benefits. Even in the former rate-of-return context, such "actual" costs would

be subject to a review to determine whether they were prudently incurred. In the

forward-looking cost context, the requirement to determine whether the costs are

indeed "efficient" should present an even higher hurdle. This hurdle cannot be

met if the ILECs' "actual" costs are taken as a given.

B. ILECs Have No Reliable "Actual" Forward-Looking Recurring Cost Data.

50. As discussed above, ILEC "actual" costs are, in fact, typically only ILEC SME

estimates (which ILECs believe are better than any other estimates) or the ILECs'

unsupported assertions about their embedded data, which they claim should be

given special preference in determining recurring costs. As an example, SBC

could not identify and thus could not remove DSL-specific costs from its UNE

loop study result. This is *not* a minor problem, as a substantial portion of the

ILECs' "actual" embedded cost data reflects activities related to deploying DSL

or other broadband services.

51. SBC has also recently admitted that it was so unfamiliar with its own accounting

data that it accidentally double-counted premises termination costs, distribution

terminal investment, and Digital Loop Carrier ("DLC") installation costs in the

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 26 of 37

LoopCAT studies it has filed in numerous states over the last year or so.³¹ In all likelihood, SBC's admission is but the tip of another iceberg.

52. The Commission should be doubly cautious in ordering a standard that requires the use of such ILEC data, particularly given the ILECs' tendency to stand by "actual" cost claims that they *know* to be wrong. As the Indiana Utility Regulatory Commission recently noted:

We find most troubling that SBC, and more particularly its cost witness Mr. Smallwood, chose not to address these issues with LoopCAT prior to this proceeding. Instead, SBC and Mr. Smallwood chose to file LoopCAT in Indiana with full knowledge that the model, as filed, inflates SBC Indiana's costs. As became clear on cross examination, Mr. Smallwood and SBC have known about the shortcomings of LoopCAT, including the problems with which SBC agrees with the CLECs, for almost a year. The CLECs raised these problems with SBC and brought them to Mr. Smallwood's attention as far back as November 2002 in a Texas TELRIC proceeding. The CLECs raised them again in California in December 2002, and again in Illinois earlier this year. Despite SBC/Mr. Smallwood's agreement with CLEC concerns, SBC/Mr. Smallwood chose not to fix the problems, much less bring them to this Commission's attention. (Tr. A-64-65 and Pitkin/Turner Response, pp. 106-107.) The CLECs have repeatedly raised this issue in Texas, California and Illinois. Yet Mr. Smallwood filed a loop study here that he knew overstated SBC's costs, and is therefore flawed. These facts lead us to severely discount Mr. Smallwood's credibility on network design issues. As a result, we adopt a large portion of Messrs. Pitkin and Turner's

³¹ Rebuttal Testimony of James R. Smallwood on Behalf of SBC Illinois, Illinois Commerce Commission Docket No. 02-0864, January 20, 2004, at Answers 11-13.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 27 of 37

recommendations regarding restatement of LoopCAT.³²

- Unless one can take apart ILEC embedded inputs completely (which is practically impossible), one will almost certainly end up including the wrong costs and/or counting the same costs multiple times when using the ILEC data as part of a "forward-looking" study. Being unable to perform this necessary analysis themselves, ILECs instead develop their existing "actual forward-looking" costs by mixing and matching their embedded accounting data together with a mishmash of spotty "actual" and engineering planning data (discussed below) in a manner that produces meaningless results.
- 54. For example, Verizon's approach (like SBC's) to developing "actual forward-looking costs" is to maintain its embedded plant locations (to the limited degree it can determine them) and to superimpose modern equipment in those same locations. Verizon (and the other ILECs) thus create "real-world" studies by locking in locations in which (good or bad) engineers chose to place equipment, following whatever guidelines were in place at the time for whatever equipment existed at that time. Thus, *e.g.*, Serving Area Interface ("SAI") facilities that were placed to cross-connect relatively small copper cables are retained in an ILEC "actual forward-looking cost" study. But, ILEC cost studies then assume that those "actual" equipment locations require costly sophisticated, modern DLC

³² Indiana Utility Regulatory Commission, *Order* in Cause 42393, approved January 5, 2004, at 41.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 28 of 37

systems, which are capable of serving substantially higher volumes of customers. In short, current ILEC "actual forward-looking cost" studies model something that is neither like the "actual" network, built long ago, nor like any network that a rational company would build on a forward-looking basis.

- above and SBC's new LoopCAT study) produce absurd results, unrelated to the "real-world" results. For example, SBC asserts that its "real-world" practice is to place fiber feeder and DLC instead of copper feeder on routes longer than 12,000 feet. Yet, SBC's new "real-world" cost study somehow combined its "actual" data in a manner that indicates the economic crossover between deploying fiber and copper would not occur until a loop route was 23,000 feet.³⁴
- 56. Because Verizon's model also forces new equipment onto existing (*i.e.*, embedded) routes where it is likely that no DLC systems actually exist today, Verizon's new "real-world" study similarly violates common sense by, for example, modeling that Verizon would "actually" place an entire DLC system to serve *one* customer and *another* to serve three nearby customers. In fact, should any DLC systems "actually" be placed in that location in the future, a single DLC could easily serve all four customers.³⁵

³³ VzCost Workshop, Tr. 3248-50.

³⁴ Declaration of John C. Donovan, Brian F. Pitkin and Steven E. Turner, California Public Utilities Commission Docket, A.01-02-024, February 7, 2003, at 29-30. The implicit economic crossover point in other jurisdictions was different, but in no case 12,000 feet.

³⁵ VzCost Workshop, Tr. 3336-3338.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004

Page 29 of 37

- looking" study merely confirms that Verizon does not have the wherewithal to model where its loop plant actually is in the real world. Verizon first vigorously asserts that its new study represents the "real" network because it is based on the physical address of each distribution terminal plus "the locations of the SAIs, the RTs, and control points" in its network from its "facility assignment and engineering systems." Verizon then admits, however, that it first needed to screen out data that were "assigned to something way out of whack." Verizon thus discarded its own "actual" data unless it determined its data were "close enough together." In some cases, Verizon's data were so "out of whack" that it chose to drop entire wire centers from its "real world" study.
- 58. It was subsequently established that Verizon could not use its "real-world" data at all without first processing those data heavily, as described above, and by other preprocessing such as running a "Spannet process." To turn its "actual" data into a cost study, Verizon needed to manipulate those data through a "process" that "isn't like a canned program." Indeed, one apparently cannot review that

³⁶ *Id.*, Tr. 3251.

³⁷ *Id.*..

³⁸ *Id.*..

³⁹ *Id.*, Tr. 3324-3325.

⁴⁰ *Id.*, Tr. 3315.

⁴¹ *Id.*, Tr. 3317-3318.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 30 of 37

process at all without making a journey to Irving, Texas.⁴² This is (at least in part) because the raw "actual" data with which Verizon begins are "huge and really not easily transferable."⁴³ The data appear to be so huge that Verizon itself could not possibly have reviewed the data on which it based its study (and that it expects regulators to take on faith).

- 59. However, even Verizon's "actual" data, whatever those data might be, do not actually identify cable routes in Verizon's real-world network, as Verizon originally claimed. Instead, the "actual" data are merely a collection of distant (real and planned and other) "dots." Verizon uses a minimum spanning tree routine to connect its dots, in some cases increasing the spanning tree distance by 15 percent to account for factors such as road curves and turns. Thus, Verizon's (and other ILECs') "real-world" approach boils down to a set of algorithms used to estimate the distance between points just like the CLEC models that the ILECs are attacking.
- 60. Like the CLEC models that the ILECs attack, Verizon's and other ILECs' models simply do not have data that can truthfully be said to reflect "real world" obstacles. Lacking any basis for distinguishing the accuracy of their results from

⁴² *Id.*, Tr. 3317.

⁴³ *Id*.

⁴⁴ See, e.g., id., Tr. 3333-3334, 3371-3388.

⁴⁵ *Id.*, Tr. 3304.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 31 of 37

CLEC modeling techniques, the ILECs now seek to have non-ILEC models discounted by Commission order as not reflecting the "real world." But, an even-handed examination would reveal that the network that ILECs are capable of modeling given the data that they actually have is, in fact, anything but actual or real world. The ILECs' best effort to produce their own "real-world" cost estimates using those data have produced nonsense results.

of some real data, some planning data, and some information on short-cuts that its engineers use to manage the network. Using these data in the VZCost model produces an absurd portrait of overlapping routes. For example, Attachment 1 is a copy of Workshop Exhibit 3 from the recent California workshop at which Verizon presented its new model. Workshop Exhibit 3 depicts a portion of the Norwalk, California service area as modeled by Verizon's new "real world" cost model. In Workshop Exhibit 3, each different colored line represents a distinct distribution route; the stars in the corresponding color represent the distribution terminals connected to that distribution cable route. The circle with ten labels appended to it just below the map scale bar in the upper right is a single location at which Verizon's "actual" data indicates that Verizon has placed 10 distinct SAIs serving 10 distinct distribution routes.

⁴⁶ See e.g., Opening Comments of SBC Communications, Inc., at 21-22; Comments of Qwest Communications International, Inc., at 16-19; Comments of the Verizon Telephone Companies at 35.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 32 of 37

62. The Workshop Exhibit 3 picture shows that Verizon's interpretation of its "real-world" data results in multiple, unshared distribution routes, and structures that completely or mainly overlap. For example, the fuchsia-colored route that runs laterally across the middle of the page does not serve any distribution terminal that is not directly in the path of some other route that Verizon modeled. Not even Verizon contends that these supposedly "actual" data correspond with anything it would actually ever build.⁴⁸

C. ILEC "Actual" Inputs Such As Fill Factors Are Unreasonable.

63. Verizon's own documentation and explanation of its new study also demonstrate the absurd and unrealistic claims that ILECs make when claiming to model their supposed "actual practices." Verizon claims to use a 2.16 cable sizing factor plus a 0.02 administrative fill factor in its study to reflect its actual engineering practice in California. In the recent workshop explaining its study, Verizon used the example of a route with total "cumulative demand" of 170 lines. Using its "real-world" approach, Verizon would apply its 2.16 sizing factor and then its 0.02 "administrative space factor" to arrive at a pair requirement of 375. It would thus assume that a 400-pair cable would be needed in the "real world," resulting in a 42.5 percent fill (exactly the same result as the CLEC-sponsored HAI Model produces).

⁴⁷ VzCost Workshop, Tr. 3308-3316.

⁴⁸ *Id.*, Tr. 3308-3311.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 33 of 37

- 64. Assume, however, that the total "cumulative demand" on a given route is actually something like 183 lines. Using its "real-world" approach, Verizon would apply its 2.16 sizing factor and then its 0.02 "administrative space factor" to arrive at a pair requirement of 403. Its model would thus assume that it needs a 600-pair cable in the "real world," resulting in a 30.5 percent fill.
- Contrary to Verizon's claim, the results reported in its "actual forward-looking cost" model bear no relationship to anything that an efficient provider would actually do in the real world. In the real world, an engineer would realize that placing a 400-pair cable to serve an expected "cumulative demand" of 183 lines would leave 217 unused lines from which to pick any lines needed for "administrative space." Thus, as is often the case in supposed ILEC "actual" results, Verizon's low calculated fill has as much to do with unrealistic assumptions about its own actual practices as it does with any true "real-world" constraint. However, to the extent that the ILEC places even this low-fill cable in anticipation of future demand, the cost of that additional capacity is caused by the plan to serve future customers, not by current customers.
- 66. In the "real world," any low fill that "actually" exists is likely to have nothing whatever to do with UNEs. For example, SBC has admitted that, in many parts of its network, it has placed both fiber and copper facilities (either to relieve old

⁴⁹ *Id.*, Tr. 3266-7.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004

Page 34 of 37

facilities or to enable DSL or broadband services). As all future demand will typically be placed on the newer fiber facilities (which can support practically unlimited demand), there is no forward-looking need for the parallel copper cable at all and therefore fill on the copper facilities will plummet over time as churn occurs. SBC itself has admitted that this is "a good point" to consider when evaluating what embedded fill factors actually imply. The ongoing movement of customers into fiber facilities that support DSL is causing "a shotgun issue" that creates "holes" in SBC's existing copper cable as time goes by. Hence, SBC's "actual" fill is in no way indicative of the fill that an efficient carrier would be able to achieve in a forward-looking environment, using only a single type of feeder (fiber or copper) for each route.

Moreover, the cost of migrating new DSL customers from the old copper onto new fiber is recorded as a maintenance expense by SBC, and therefore is included in the "actual" expenses that the ILECs propose to include in UNE costs.⁵² Thus, the ILEC "actual" cost approach would doubly inflate UNE costs that competitors pay, by making them pay for low fill on old, abandoned copper and also for the expense of moving the end users off of that copper onto new fiber.

⁵⁰ California Public Utilities Commission, SBC California UNE cost technical workshop, June 26, 2003, Tr. 921-2.

⁵¹ *Id.*, Tr. 924-5.

⁵² *Id.*, Tr. 925.

Declaration of Terry L. Murray and D. Scott Cratty
In Support of Reply Comments of Broadview Networks, Eschelon Telecom,
KMC Telecom, Mpower Communications, NuVox, Sage Telecom,
Talk America, XO Communications, and Xspedius.
WC Docket No. 03-173
January 30, 2004
Page 35 of 37

D. Price Cap Regulation Solves None of These Problems.

- 68. The ILECs predictably and repeatedly assert that whatever costs they report for the existing network necessarily reflect efficient operations because they have been under price cap regulation for a number of years. That claim should be dismissed for multiple reasons.
- 69. First, although the ILECs emphasize this point as a key reason that the Commission should mandate using their "actual costs," they uniformly offer no analysis to demonstrate that their operations are in fact efficient.
- 70. Second, as noted in our initial declaration, the ILEC claim that the Commission need not be concerned that their "actual" costs are inefficient is belied by their recent and ongoing announcements that they are finding ways to drastically reduce their operating costs.
- Third, by assuming that the ILECs' current costs are already efficient (as the ILECs implore), the Commission would create a form of price "umbrella" under which the ILECs might protect some of the inefficiencies that the Act was intended to eliminate. Doing so would include a portion of whatever inefficient costs the ILECs may incur as part of the cost structure of all UNE-based competitors, so that those competitors could not pressure the ILECs to reduce those costs. Eliminating such price umbrellas is an essential justification for retaining a cost methodology that relies on an objective analysis of what an efficient network would reasonably cost, such as TELRIC.

Declaration of Terry L. Murray and D. Scott Cratty In Support of Reply Comments of Broadview Networks, Eschelon Telecom, KMC Telecom, Mpower Communications, NuVox, Sage Telecom, Talk America, XO Communications, and Xspedius. WC Docket No. 03-173

> January 30, 2004 Page 36 of 37

- 72. Fourth, price caps may have (in at least some cases) provided less incentive for the ILEC to become efficient than to game its accounting practices. For example, price caps create an incentive for the ILEC to shift reported costs to regulated operations and away from non-regulated operations.
- 73. Fifth, as noted above, price caps can provide no incentive for the ILEC to avoid double counting costs, reporting inefficient costs, or developing studies that manufacture inefficient costs or create artificial costs by overlaying new costs on old designs.

CONCLUSION

- 74. We have shown above that ILECs claim that their existing "TELRIC" studies are also "actual forward-looking cost studies"; hence, adopting an "actual forward-looking cost" standard would not streamline UNE costing and pricing proceedings. The newest ILEC "actual forward-looking cost models" are, if anything, more complex than other forms of UNE cost studies. Moreover, the ILECs do not possess the necessary data to model "actual forward-looking costs." Nor can one presume that their accounting data, existing networks and planned network modifications reflect only the activities of an efficient carrier.
- 75. For all of these reasons, and the reasons described in our initial declaration, the Commission should reaffirm its TELRIC methodology and reject the ILECs' "actual forward-looking cost" proposals.
- 76. This concludes our reply declaration.

VERIFICATION PAGE

I, Terry L. Murray, declare under penalty of perjury that the foregoing is true and correct.

Jerry L. Murray Terry L. Murray

January 30, 2004

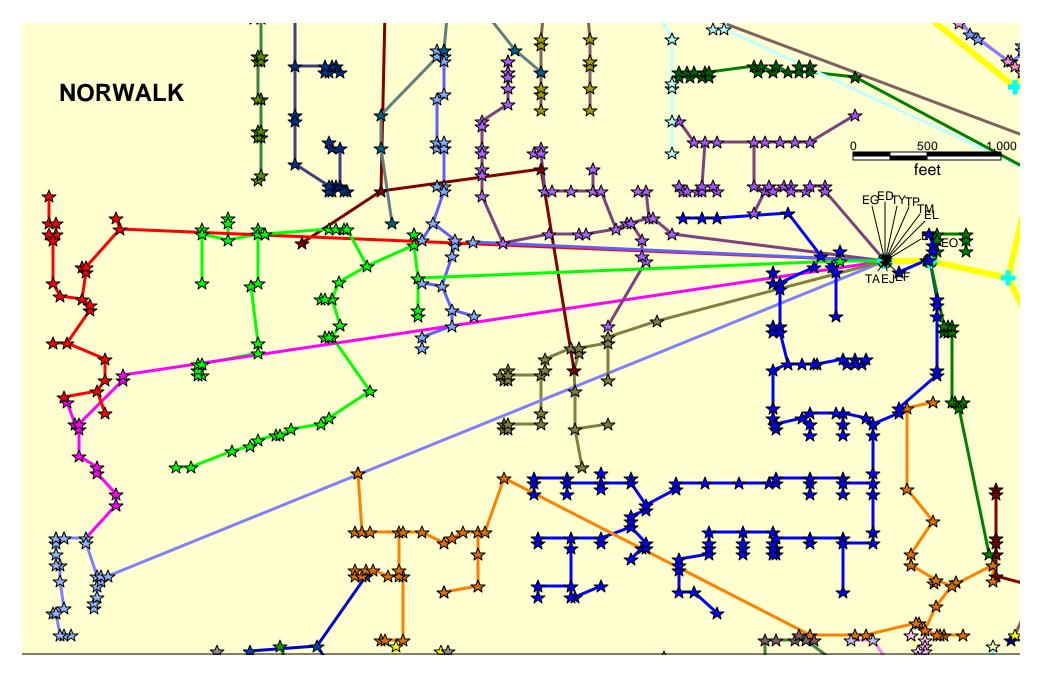
VERIFICATION PAGE

I, D. Scott Cratty, declare under penalty of perjury that the foregoing is true and correct.

D. Scott Cratty

January 30, 2004

ATTACHMENT 1



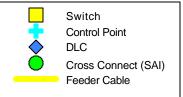


EXHIBIT 2

Mark Harrington, "Verizon Software Had Flaws," Newsday.com (Oct. 14, 2003)



Phone Static

Verizon software had flaws

By Mark Harrington STAFF WRITER

October 14, 2003

In the summer of 2001, a team of analysts tinkering with a slow-running software program at Verizon Communications Inc. came upon a jaw-dropping discovery. The program, which had been developed two years earlier to compile crucial service reports for federal regulators, contained elemental flaws that rendered some reports "inaccurate" - almost always in Verizon's favor.

In a report to senior management dated Aug. 27, obtained by Newsday, the analysts minced few words about the significance of their findings.

"This is highly important, as we now know, without doubt, that ... [the former GTE and Bell Atlantic] have been reporting inaccurately to the FCC since February 2000," the August 2001 report says.

Two years later, rival telecom firms contacted by Newsday worry that possible inaccuracies could have had erious consequences for their businesses - and the service they provided their customers.

Federal law requires Verizon and other Baby Bells provide service to rival telecom firms that is equal to, or "in parity," to the service they provide to their own customers.

Verizon last week acknowledged the flaws, but said it has already replaced the software. Any reporting errors, which Verizon said were passed to the FCC at the time, were "statistically insignificant" and did not impact any potential payments due the FCC, it said.

An official at the FCC, which has never fined Verizon for missing the parity requirement, said the regulatory agency was unaware of a Verizon software error that could have affected two years of reports.

"Obviously, if we had reason to believe there were a violation of our rules, we would look at it," said Suzanne Tetreault, associate chief in the chief of staff's office for the FCC's enforcement division, adding the report, if verified, could warrant further examination. "It's certainly something we're interested in."

The revelations come as Verizon is scheduled to argue an appeal before the U.S. Supreme Court today seeking to reverse a ruling that allowed consumers and rival phone companies to sue the Baby Bells for failing to adequately open their markets to competition. Rival companies have long complained that Baby Bells such as Verizon have provided them with unequal processing of orders and service, claims the conglomerates can refute by pointing to FCC service records.

Verizon had used the errant software to crunch raw data from most of its operating regions across the country to eport to the FCC on whether it was providing proper service to the hundreds of local competitors that relied on its network and repair operations to stay in business. Showing the service levels were relatively the same was a

Legal Questions?

Legal Answers

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crucial stipulation of the Telecom Act of 1996. Providing poorer service to the rivals could mean Verizon would have paid fines up to millions of dollars.

The final output reporting the number of 'out of parity' conditions has been incorrect since February 2000, or whenever the process went into production," the Verizon report concluded.

Rival telecom companies, who said they were never informed of the flaw and had no way of measuring its impact on them, are crying foul.

"It would definitely impact the amount of fines they would have had to pay," said Ross Buntrock, an attorney for rival telecom companies at Kelley Drye & Warren Llp, a Washington, D.C., law firm. "This could give rise to huge liability for Verizon."

Verizon acknowledges the errors, but says it "determined that the initial [flawed] software did not materially impact any reported results or payment calculations," spokesman John Bonomo said in an e-mail statement. The company "discovered one error and was able to fix the error prior to making any payments under the FCC plan back in 2001."

But a person familiar with the error said the only way to make certain Verizon wouldn't owe penalties is to rerun the reports with the corrected software from the time the errant software was put in use.

While the problems that occurred from 2000 to 2002 as the telecom industry went bust involve complex software and esoteric equations, the stakes are high for consumers and for the phone companies alike.

The FCC levies fines at its discretion. The so-called parity rules require that Verizon and other Bells statistically plot their service performance, and compare it to those that Verizon provides competitors under FCC rules that llowed it to enter long-distance markets and merge.

Some phone companies that compete with Verizon have long complained that because the nation's largest local phone provider is effectively in charge of the process, including hiring and paying firms to conduct annual FCC-mandated outside audits, they have little way of vetting the data.

"Those numbers were never terribly transparent," said Jonathan Lee, vice president of regulatory affairs at CompTel, a Washington-based group of local phone providers that compete with Baby Bells.

The FCC's Tetreault said the agency examines the monthly reports but simply cannot delve deep into the data behind them.

"It's safe to say it's not our typical practice to go into the raw data. It is a mountain of data," she said.

FCC sources, meanwhile, said software glitches in the reporting system have long been suspected and in some cases verified, and that the agency has little or no knowledge of the various software programs Baby Bells use to collect and analyze such data.

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